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ABSTRACT

Field testing of learning materials developed by the Counselors Expanding Career Options (CECO) Project, specifically The Whole Person Book, was conducted during the 1977-1978 school year in 72 secondary schools in Nebraska, Kansas, Iowa, and Colorado. The field test design established three comparison groups of secondary counselors and teachers. The first group (N=27) attended a workshop and used the materials with students; the second group (N=32) used the materials, but received no training; and the third group (N=27) was the control group. Several instruments were used to generate attitudes toward sex role differentiation. Results of the data analysis indicated: (1) the training group's knowledge of women's participation in the work force increased more than the other two groups; (2) females reported more positive attitudes than males toward women and work roles; and (3) no differences in attitudes as measured by the Attitudes Toward Sex Role Differentiation in Education (A/SRDE) were found between the pre- and post-testing times. (Author/HLM)

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EXPANDING CAREER OPTIONS: NON-STEREOTYPED CAREER COUNSELING

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The purpose of the Counselors Expanding Career Options (CECO) Project was to develop and field test non-sexist career education materials for rural and non-urban secondary schools. The project, a division of the Nebraska Commission on the Status of Women, was funded under the Women's Educational Equity Act of the 1974 Educational Amendments.

The project product, THE WHOLE PERSON BOOK, provides activity plans for rural or non-urban high school counselors and teachers which contain ideas and activities for classroom or small group guidance counseling. The materials were tested by a variety of teachers and counselors in a variety of content areas including career education classes, adult living, multi-cultural education, family living, psychology, government, English, sociology, modern problems, biology, religion, consumer economics, technical writing, general business, speech, office practice, with gifted students and academically marginal students.

The learning materials were designed to be adaptable; the core ideas are presented without restricting creativity or the variety of approaches. Evidence of THE WHOLE PERSON BOOK flexibility is reflected by the wide range of users in addition to the target high school population. These groups included elementary students, postsecondary students, community groups, parent groups, community action personnel, higher education faculty and correctional (institution) counselors.

Perspective

Evidence indicates that career materials reinforce and perpetuate sex role stereotypes in career choice. Various studies which examined illustrations, language usage, and/or role models in career materials concluded most reinforced occupational stereotypes (Birk, Cooper, & Tanney, 1973; Heshusius-Gilsdorf & Gilsdorf, 1975; Vetter, Stockburger & Brose, 1974; and Women on Words and Images, 1975). The Counselors Expanding Career Options (CECO) Project was developed as a response to this need for non-sexist career materials.

The rationale for the CECO Project rests on the need for career education programs to encourage students to develop their talents and skills to an optimal level, eliminating stereotypic career tracking for males and females. The career/guidance counselor performs a critical function in attaining these objectives. In many career education programs, the counselor provides systematic and comprehensive planning, and acts as a link between the instructional and guidance programs (Gysbers, 1977). The development of the learning materials in THE WHOLE PERSON BOOK is based on assumptions which emphasize the uniqueness of each individual.

Methods/Results

Field testing of the learning materials was conducted during the 1977-1978 academic year in 72 secondary schools in Nebraska, Iowa, Kansas, and Colorado. The field test design established three comparison groups composed of secondary counselors and teachers. The first group included school personnel (N=27) who attended a one-day training workshop and who used materials from THE WHOLE PERSON BOOK with students. The second group (N=32) also used THE WHOLE PERSON BOOK materials, but did not receive training. Both groups were asked to integrate the CECO materials into their career guidance program. The third group (N=27) was the control group. These school personnel did not use the CECO materials in student learning situations. They were asked to maintain their regular career guidance program without integrating non-sexist, non-traditional career materials during the year.

The instruments used to generate data for the field test were: (1) the Attitudes Toward Sex Role Differentiation in Education--A/SRDE (Davis, Podemski, Engin, & Silver, 1977) which assesses attitudes toward social roles of women in society and education; (2) the Social Reaction Inventory (Rotter, 1966) which assesses the individual's personal orientation to control of decision making (internal/external locus of control); (3) the Bem Sex Role Inventory (Bem, 1976) which measures androgyny; and (4) the Title IX/Women and Careers Inventory (Christensen-Liggett, Romero, & Pflum, 1977) which tests knowledge of Title IX regulations and women's involvement in the work force.

The data were analyzed using a Repeated Measures Analysis of Variance. A 3 x 2 x 2 factor design was used for analysis of these factors--treatment, sex, and professional role. There were three levels of treatment--workshop participants, material by mail participants, and control participants. There were two levels of sex--females and males. There were two levels of professional role--counselors and teachers. All participants were separated into one of 12 comparison groups using these three factors.

There was one significant difference found between the pre- and post-testing. The training group increased in knowledge of women's participation in the work force greater than the other treatment groups ($F_{2,72} = 4.89$, $p \leq .01$).

There were several significant results when pre and post scores were combined: (1) Females reported more postive attitudes than males toward women and work roles ($F_{1,72} = 9.58$, $p \leq .01$). (2) There was a sex/role interaction regarding knowledge of Title IX regulations with female counselors exhibiting more knowledge of Title IX regulations than any other group ($F_{1,72} = 5.12$, $p \leq .05$). (3) Females exhibited more knowledge of female participation in the work force than males ($F_{1,72} = 5.44$, $p \leq .01$). (4) Females were more likely to report androgynous personalities while males were more likely to report masculine personalities ($F_{1,72} = 5.09$, $p \leq .05$). Tables 1 through 11 report these results.

Discussion

Contrary to our predictions, the results for the time interactions (the pre- and post-testing) were not significant. It was hypothesized, especially for the A/SRDE and the Title IX/Women and Careers Inventory, that changes in attitudes and knowledge level would occur from the pre- to the post-testing. No differences in attitudes as measures by the A/SRDE were found between the pre- and post-testing. One problem which may have contributed to these results

is that pre- and post-testing was conducted in the second and ninth months of the school year leaving approximately six + months for the treatment. Research on attitude change suggests a longer treatment time is needed to adequately assess attitude change.

The results which show differences between females and males when pre- and post-tests are combined reinforce an unpublished pretest analysis. Both analyses show that females have a more positive atttitude than males toward female participation in the work force. It appears that involvement in the CECO Project did not make an impact on attitudes held by males, but did strongly reinforce the attitudes of females.

The results for the Title IX/Women and Career Inventory support an original hypothesis. Differences from pre- to post-testing among treatment groups were expected. No differences among treatment groups were found in the pretesting. Differences found in the pre/post analysis would indicate that knowledge can be increased when information regarding female participation in the work force is provided to school facilitators who then use that information with student learners. The role/sex interaction effect indicates that scores on the Title IX subscale obtained by counselors and teachers are confounded by their sex.

The Social Reaction Inventory pretest results showed no statistically significant correlations between internal or external orientations and scores on the A/SRDE of Title IX/Women and Careers Inventory. Change scores were also insignificant. This is understandable since research has indicated that internal and external orientation is extremely difficult to change. The decision to not utilize inventory scores as an independent variable was primarily based on the small number of cases resulting from attrition and the pretest results.

The results for the Bem Sex Role Inventory indicate females were more likely to report androgynous personalities while males more often reported masculine personalities. These results are not surprising since the emphasis on emerging roles has focused on changes for and by women. This has led to the report of more "flexible", androgynous personalities by females who exhibit both feminine and masculine behaviors. In contrast, there has been little motivation for men to report or exhibit the masculine and feminine behaviors of an androgynous personality.

Conclusions

The statistical results were not as strong as had been hoped. While positive changes occurred in *knowledge* of Title IX regulations and of the role of women in the work force, *attitude* changes were not statistically significant.

There may be several reasons for these results. First, research regarding attitude change suggests that attitudes change very slowly; a great deal of time is needed to produce a lasting attitude change. The project assessed attitudes through pre- and post-testing in an eight month period with approximately six months for treatment. A longer treatment time was probably needed to facilitate or discern any changes in attitudes toward women's roles.

Second, because of the nature of assessment instruments, it is possible that the instruments chosen to assess attitudes and personal orientation did not adequately reflect the intensity or the subtleties of those attitudes.

Third, the results indicated that males consistently have less favorable attitudes and less knowledge of Title IX regulations and female work roles than do females. It appears that a different approach may be necessary in order to produce a stronger investment or commitment of the male participants. Assessment of attitudes toward males in nontraditional roles seem to be nonexistent and may in part contribute to a lack of commitment on the part of males. Perhaps a greater emphasis on the impact of women's emerging roles on *men's* roles is needed.

Fourth, it seems that the treatment (longer and indepth use of the curriculum materials) needs to be intensified. The results of two unreported analyses although conflicting suggest that using a larger number of learning activities may have a positive impact on the student attitudes. Funding and time limitations did not allow us to construct a field test to adequately assess facilitator attitudes in the student testing groups which reflected an indepth use of the materials.

Finally, it is important that the statistical data be related to other forms of evaluation. Workshop participants regarded the training workshop very positively. They felt the materials and training were useful and informative. An evaluation of facilitator information included in the materials indicated that participants felt helpful, enlightening materials and suggestions were provided. Further, on-site visits and activity evaluations showed the participants responded favorably to the student learning materials in terms of content, format and usability of the materials. The overall response to the CECO materials has been enthusiastic acceptence.

The product of the CECO Project, THE WHOLE PERSON BOOK, has recently been accepted for dissemination. When published, THE WHOLE PERSON BOOK will be available for purchase at cost from the Education Development Center. Inquiries should be directed to the Education Development Center, 55 Chapel Street, Newton, Massachusetts.

Summary

The study suggests that providing school personnel with materials for classroom use can have an impact on their personal knowledge. While awareness is a necessary step in changing attitudes regarding women's emerging roles in society, there is some evidence to suggest that exposure to materials which facilitate behavioral changes may also be a vital step in changing attitudes.

Table 1: A/SRDE
Summary Table
(N=84)

Source	MS	F
Main Effects:		
Time (pre/post)	0.82	0.01
Sex	3228.72	9.58*
Role level	1.79	0.01
Treatment level	39.32	0.12
Role x Sex	550.86	1.63
Treatment x Sex	56.89	0.17
Treatment x Role	199.82	0.59
Treatment x Role x Sex	41.75	0.12
Error	336.93	
Time Interaction Effects:		
Sex x Time	89.98	1.23
Role x Time	73.99	1.01
Treatment x Time	58.61	0.80
Role x Sex x Time	35.87	0.49
Treatment x Sex x Time	78.31	1.07
Treatment x Role x Time	144.26	1.97
Treatment x Role x Sex x Time	38.01	0.52
Error	73.12	

*$F_{1,72}$; $p < .01$

Table 2: A/SRDE
Means Table

	Pre $\bar{x}$	Post $\bar{x}$	Summed $\bar{x}$s
Females (N=45)	149.04	146.58	147.81
Males (N=39)	140.33	141.62	140.97
Total (N=84)	145.00	144.27	

Table 3: Social Reaction
Summary Table
(N=84)

Source	MS	F
Main Effects:		
Time (pre/post)	17.23	2.72
Sex	44.46	1.79
Role level	89.47	3.61
Treatment level 1	12.17	0.49
Treatment level 2	15.00	0.60
Role x Sex	3.43	0.14
Treatment 1 x Sex	1.98	0.08
Treatment 2 x Sex	9.61	0.39
Treatment 1 x Role	17.20	0.69
Treatment 2 x Role	2.43	0.10
Treatment 1 x Role x Sex	0.002	0.001
Treatment 2 x Role x Sex	14.61	0.59
Error	24.81	
Time Interaction Effects:		
Sex x Time	0.53	0.08
Role x Time	0.22	0.03
Treatment 1 x Time	5.44	0.86
Treatment 2 x Time	2.58	0.41
Role x Sex x Time	1.60	0.25
Treatment 1 x Sex x Time	0.40	0.06
Treatment 2 x Sex x Time	0.02	0.00
Treatment 1 x Role x Time	0.03	0.00
Treatment 2 x Role x Time	3.00	0.47
Treatment 1 x Role x Sex x Time	1.29	0.20
Treatment 2 x Role x Sex x Time	16.50	2.60
Error	6.34	

Table 4: Title IX/Women and Careers Inventory
Summary Table - Total Scores
(N=84)

Source	MS	F
Main Effects:		
Time (pre/post)	21.69	4.89*
Sex	35.77	3.06
Role level	95.37	8.16**
Treatment level	4.56	0.39
Role x Sex	42.88	3.67*
Treatment x Sex	1.62	0.14
Treatment x Role	18.52	1.58
Treatment x Role x Sex	17.24	1.47
Error	11.69	
Time Interaction Effects:		
Sex x Time	2.48	0.56
Role x Time	6.14	1.38
Treatment x Time	23.25	5.24***
Role x Sex x Time	0.02	0.00
Treatment x Sex x Time	3.93	0.89
Treatment x Role x Time	2.50	0.56
Treatment x Role x Sex x Time	0.50	0.11
Error	4.43	

*$F_{1,72}$; $p < .05$

**$F_{1,72}$; $p < .01$

***$F_{2,72}$; $p < .01$

Table 5: Title IX/Women and Careers Inventory
Means Table - Total Scores

	Pre $\bar{x}$	Post $\bar{x}$	Summed $\bar{x}$s
Workshop Group	13.88	17.27	
Mailed Materials Group	14.87	16.16	
Control Group	14.78	15.26	
Female Counselors (N=24)	15.75	18.08	16.92
Female Teachers (N=21)	13.48	15.00	14.24
Male Counselors (N=24)	14.63	15.54	15.08
Male Teachers (N=15)	13.93	16.00	14.97

Table 6: Title IX/Women and Careers Inventory
Summary Table - Title IX Scale
(N=84)

Source	MS	F
Main Effects:		
Time (pre/post)	0.09	0.04
Sex	0.18	0.05
Role level	28.61	7.36**
Treatment level	0.23	0.06
Role x Sex	19.92	5.12*
Treatment x Sex	3.85	0.99
Treatment x Role	7.43	1.91
Treatment x Sex x Role	10.24	2.64
Error	3.89	
Time Interaction Effects:		
Sex x Time	1.92	0.88
Role x Time	1.15	0.53
Treatment x Time	5.50	2.53
Role x Sex x Time	0.11	0.05
Treatment x Sex x Time	0.00	0.00
Treatment x Role x Time	0.57	0.26
Treatment x Role x Sex x Time	0.65	0.30
Error	2.18	

*$F_{1,72}$; $p < .05$

**$F_{1,72}$; $p < .01$

Table 7: Title IX/Women and Careers Inventory
Means Table - Title IX Scale

	Pre $\bar{x}$	Post $\bar{x}$	Summed $\bar{x}$s
Female Counselors (N=24)	7.29	8.25	7.77
Female Teachers (N=21)	5.95	7.14	6.53
Male Counselors (N=24)	6.92	7.38	7.15
Male Teachers (N=15)	6.60	7.67	7.14

Table 8: Title IX/Women and Careers Inventory
Summary Table - Women/Careers Scale
(N=84)

Source	MS	F
Main Effects:		
Time (pre/post)	1.84	1.22
Sex	30.90	5.44**
Role level	19.51	3.44
Treatment level	2.81	0.50
Role x Sex	4.35	0.77
Treatment x Sex	8.05	1.42
Treatment x Role	2.67	0.47
Treatment x Role x Sex	4.50	0.79
Error	5.68	
Time Interaction Effects:		
Sex x Time	0.61	0.41
Role x Time	0.09	0.06
Treatment x Time	7.36	4.89*
Role x Sex x Time	1.08	0.72
Treatment x Sex x Time	4.10	2.72
Treatment x Role x Time	2.99	1.98
Treatment x Role x Sex x Time	0.25	0.16
Error	1.51	

*$F_{1,72}$; p .01

**$F_{1,72}$; p .05

Table 9: Title IX/Women and Careers Inventory
Means Table - Women/Careers Scale

	Pre $\bar{x}$	Post $\bar{x}$	Summed $\bar{x}$s
Workshop Group	7.54	9.69	
Mailed Materials Group	8.03	8.65	
Control Group	7.81	8.07	
Females (N=45)	7.93	9.07	8.50
Males (N=39)	7.59	8.36	7.96

Table 10: Bem Sex Role Inventory
Summary Table
(N=84)

Source	MS	F
Main Effects:		
Time (pre/post)	12.82	0.26
Sex	2130.99	5.09*
Role level	542.04	1.29
Treatment level	144.17	0.34
Role x Sex	1074.18	2.57
Treatment x Sex	670.35	1.60
Treatment x Role	17.30	0.04
Treatment x Role x Sex	18.75	0.04
Error	418.73	
Time Interaction Effects:		
Sex x Time	0.73	0.01
Role x Time	2.23	0.04
Treatment x Time	14.99	0.30
Role x Sex x Time	106.05	2.11
Treatment x Sex x Time	11.71	0.23
Treatment x Role x Time	97.48	1.94
Treatment x Role x Sex x Time	16.10	0.32
Error	50.18	

*$F_{1,72}$; $p < .05$

Table 11: Bem Sex Role Inventory
Means Table

	Pre $\bar{x}$	Post $\bar{x}$	Summed $\bar{x}$s
Females (N=45)	-1.24	-0.24	-0.74
Males (N=39)	-5.72	-9.72	-7.63